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Gradient control mats are ideal in situations that have voltage differences between structures such as above grade piping in facilities, test stations in HVAC corridors, valve sites, and meter runs. Limitation capabilities are also factor in potential hazards such as lightning strikes and ground faults.

Made from 10-gauge steel wire, the gradient control mat has a 3"x 3" spaced wire frame wherein all intersections are welded together. Once the mat is welded, a hot dip galvanizing ensures a quality product.

Standard mats are created at 4' x 8' sheets, however, if your project requires a specific size, we can create custom orders for your needs.

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## STANDARD APPLICATIONS

Gradient Control Mats can be placed in any setting where voltage changes are present. Many applications include:

- Test Stations within a power line corridor. This monitors step voltage and touch voltage.
- Up to 4 feet above a stations' piping. When placed alongside the pipeline, the mat can protect a facilities's step and touch voltage.
- At a block valve site, the mat is best installed around the valve controls or at the meter or regulator facilities near the pipe.
- Consistent voltage at contact points can be found when applied near a fence or gate.

## BENEFITS

- Created for all soil conditions, the mats are created with galvanized steel. Protection of magnesium anodes is required in low-resistivity soil.
- Custom-size mats can be created to meet your project needs.
- A cost-effective alternative to pure zinc mats.
- Exothermic welding allows for quality product mat-to-mat and mat-to-cable connections.
- Power frequency volt limitations allows for safer environments for your project and workers on site.



## WHY ADD A MAT DECOUPLER?

A mat decoupler improves the cathodic protection of pipelines, as well as provides a Solid-State Decoupler line (SSD) to be used in conjunction with the mat. Should you decide to utilize SSD, the galvanic potential of the mat will not affect the pipeline's cathodic protection.

## TECHNICAL SPECIFICATIONS

- The mats are created with 10-gauge (0.135") steel wire
- 3" x 3" spacing, with all overlapping wire welded
- Galvanized dipped

### RECOMMENDATIONS

- Install with a solid-state decoupler
- Install with Magnesium anodes for longevity

REQUIRED TYPE & NUMBER OF MAGNESIUM ANODES					
MAT SIZE	SOIL RESISTIVITY	ANODE TYPE	# OF ANODES NEEDED	DECOUPLED GCM	DIRECTLY CONNECTED GCM
4' X 8'	Low (1000 - 2000)	32S5	1	>20 years	>18 years
	Moderate (over 2000)	17S4	1	>20 years	>20 years
8' X 8'	Low (1000 - 2000)	32S5	1	>20 years	>17 years
	Moderate (over 2000)	17D4	1	>20 years	>20 years
8' X 16'	Low (1000 - 2000)	17S4	2	>20 years	>19 years
	Moderate (over 2000)	32D5	1	>20 years	>20 years
12' X 16'	Low (1000 - 2000)	32S5	2	>20 years	>20 years
	Moderate (over 2000)	32D5	1	>20 years	>20 years
16' X 16'	Low (1000 - 2000)	32S5	2	>20 years	>19 years
	Moderate (over 2000)	32D5	1	>20 years	>20 years